



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,759	04/14/2004	Kuo-Rong Chen	OP-093000122	5064
7590	07/28/2006		EXAMINER	
Yi-Wen Tseng 4331 Stevens Battle Lane Fairfax, VA 22033			SANEI, HANA ASMAT	
			ART UNIT	PAPER NUMBER
			2879	

DATE MAILED: 07/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/823,759

Applicant(s)

CHEN ET AL.

Examiner

Hana A. Sanei

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-18 is/are pending in the application.
- 4a) Of the above claim(s) 11-17 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5 and 18 is/are allowed.
- 6) ☒ Claim(s) 7-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Response to Amendment

The Amendment, filed on 5/15/06, has been entered and acknowledged by the Examiner.

Cancellation of claim 6 has been entered.

Claims 1-5, 7-18 are pending in the instant application

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 7-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakai et al (US 6057636).

With respect to Claim 7, Sakai teaches a converging electrode layer (inducing electrode, 40, see at least Fig. 10) having an array of first apertures extending therethrough; a spacing glass plate (15, SiO₂; Col. 10, lines 45-46) located adjacent to one side of the converging electrode layer, the spacing glass plate having a plurality of second apertures (apertures between two adjacent 15) aligned with the first apertures and formed on the other side of the converging electrode layer; and a gate layer (14) including a plurality pair of conductive lines (portions encompassing apertures) located adjacent to the insulation layer, wherein each of the conductive lines is aligned with a portion of the converging electrode layer between one pair of neighboring rows of the

Art Unit: 2879

first apertures and each pair of conductive lines sandwiches a row of the first aperture (see Fig. 12). That Sakai's gate layer is provided with predetermined separate apertures implies the inherency of providing the gate layer with conductive "lines" inherently forming a "pair" that surrounds a respective aperture.

With respect to Claim 8, Sakai teaches that the gate layer (14) further comprises a hollow frame (aperture) within which the conductive lines extend (non-apertured portions Fig. 10). It should be noted that Sakai's hollow frame is apertures-conductive line-aperture combination implies that the conductive lines extend within.

With respect to Claim 9, Sakai teaches that the second apertures are aligned with one corresponding first aperture (Fig. 10).

With respect to Claim 10, Sakai teaches that each of the second apertures is aligned with a row or column of corresponding first apertures (Fig. 10).

Allowable Subject Matter

Claims 1-5, 18 are allowed over the prior art of record.

The following is an examiner's statement of reason for allowance: The prior art of record neither shows nor suggests a mesh structure disposed between a plurality of anode units and cathode units of a tetraode field emission display, comprising all of the limitation set forth in Claim 1, particularly comprising the limitations of a first conductive layer to serve as a converging electrode layer having a proximal surface facing the anode units and a distal surface opposing to the proximal surface and comprising a plurality of first apertures, a glass plate formed on the proximal surface of the first

Art Unit: 2879

conductive layer and including a plurality of second apertures, an insulation layer formed on the distal surface of the first conductive layer, a second conductive layer formed on the insulation layer to serve as a gate electrode layer wherein the second conductive layer includes a plurality of third apertures and aligned with the first and second apertures, wherein a plurality of isolation slits extend across the second conductive layer so that a pair of conductive strips are formed at two elongated sides of each third aperture, each pair of the conductive strips constructs an independent conductive paths to be biased with a potential and a gate operative to drain electrons from the cathode unit between the pair of conductive strips is formed, together with the other cited limitations.

Claims 2-5, 18 are allowable as being dependent upon an independent Claim 1.

Response to Arguments

Applicant's arguments filed on 5/15/06 have been fully considered but they are not persuasive.

A. In response to Applicant's arguments that does not disclose Sakai et al (US 6057636) does not read on applicant's amended Claim 7, the Examiner respectfully disagrees.

The language employed to describe the Applicant's invention does not merit a change in the scope as applicant's amendment is stating an inherent property of a pair of conductive lines and their locality. It is clear that Sakai teaches a pair of conductive lines that correspondingly "sandwich" a row of the first apertures along a one axis of the field emission display of Sakai. Accordingly, the limitation that each of the conductive

Art Unit: 2879

lines is aligned with a portion of the converging electrode layer between one pair of neighboring rows of the first apertures and each pair of conductive lines sandwiches a row of the first aperture is disclosed by Sakai's teaching, which falls within applicant's claimed invention.

For the reasons stated above, the rejection of the claims is deemed proper.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hana A. Sanei whose telephone number is (571) 272-8654. The examiner can normally be reached on Monday- Friday, 9 am - 5 pm.

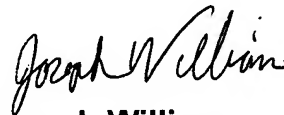
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Art Unit: 2879

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Hana A. Sanei
Examiner



Joseph Williams
Primary Examiner